

REMARKS

Claims 1-15 are pending in the present Application. Applicant has amended claims 1 and 9. Applicant has also added claims 16-17. Consequently, claims 1-17 remain pending in the present Application.

Applicant has amended claims 1 and 9 to recite that the filter coating and the surface that it coats are free of epoxy. Support for this amendment can be found in the specification, page 8, lines 3-6. Applicant has added claims 16-17. Support for new claims 16 and 17 can be found in 3, items 116 (filter), 118 (coating), and 112 (filter holder).

In the above-identified Office Action, the Examiner rejected claims 1-15 under 35 U.S.C. § 103 as being obvious in light of U.S. Patent Application Publication 2002/0071630 (Su) in view of U.S. Patent No. 6,469,847 ("Fan").

Applicant respectfully traverses the Examiner's rejection. Independent claim 1 recites a dense wavelength division multiplexer (WDM) including a dual fiber collimator, a filter holder, and a filter. The dual fiber collimator includes lens and a capillary for holding a plurality of fibers. The filter holder has an aperture therein. The filter is disposed between the dual fiber collimator and the filter holder. The filter has a first surface and a second surface opposite to the first surface. The first surface is covered with a filter coating. The filter is affixed to the filter holder by the second surface. Consequently, as recited in claim 1, the first surface and the filter coating are free of epoxy. Similarly, independent claim 9 recites a method for filtering an optical signal using a dense WDM. The method recited in claim 9 includes the steps of providing an optical signal to a dual fiber collimator including a lens and a capillary. The capillary is for holding a plurality of fibers. Claim 9 also recites the step of filtering the optical signal to provide a filtered signal. The optical signal is filtered using a filter held in a filter holder having an aperture therein. The recited filter has a first surface and a second surface opposite to the first surface.

The first surface is covered with a filter coating. The filter is affixed to the filter holder by the second surface. Claim 9 also recites that the first surface and the filter coating are free of epoxy.

Because claims 1 and 9 recite that the first, coated surface and the filter coating are free of epoxy, the filter coating is not subject to stresses induced by contact with epoxy. Specification, page 8, lines 3-6. As a result, the center wavelength, bandwidth, and band shape of the filter for optical signals having densely packed channels are not adversely affected. Specification, page 8, lines 6-8. In addition, the filter is less subject to changes in the optical properties due to changes in the environment, thereby improving the accuracy and stability of the WDM. Specification, page 8, lines 9-11.

Su in view of Fan does not teach or suggest a dense WDM having a filter held in a filter holder such that the first surface and the filter coating for the first surface are free of epoxy. Applicant agrees that Su teaches a WDM using a filter held in a filter holder. However, as the Examiner has indicated, Su does not mention the filter coating. Furthermore, the filter in Su is still pasted onto the filter holders. Su, paragraph [0009], lines 9-12 and paragraph [0020], lines 6-10. Furthermore, Su specifically states that the WDM of Su "does not paste the filter 10 on the grin lens surface of the first collimator surface, the filter is pasted to the special metal holder 20 with epoxy . . ." Su, paragraph [0020], lines 6-8. As described in the Background of the present application, in conventional WDMs, the filter is typically attached to the grin lens using the filter coating surface using epoxy. Specification, page 2, lines 7-10. Thus, despite comparing and contrasting the filter of Su to that of the prior art, Su does not mention ensuring that the filter coating or the surface that is coated are free of epoxy. Consequently, despite utilizing a holder for the filter, Su does not indicate that the surface that is coating and the filter coating should be treated in any special manner. Consequently, Su does not teach or suggest a dense WDM having a filter held in a filter holder such that the first surface and the filter coating for the first surface are free of epoxy.

Fan fails to remedy the defects of Su. Fan does describe a filter having a coating surface 34. Fan, col. 2, lines 4-5. However, Fan also specifically teaches that the filter is attached to a retaining ring using an epoxy that is in contact with the filter coating layer. Fan, col. 2, lines 56-59. Consequently, at worst, Fan does not alter the teachings of Su, which do not indicated that the filter coating or the surface it coats should be free of epoxy. Moreover, if the teachings of Fan are combined with those of Su, then the combination would attach the filter of Fan in the same manner as Fan in the filter holder of Su. Consequently, when the teachings of Fan are added to those of Su, the combination teaches away from the recited dense WDM having a filter held in a filter holder such that the first surface and the filter coating for the first surface are free of epoxy. Consequently, Su in view of Fan fail to teach or suggest the dense WDM and method recited in claims 1 and 9, respectively. Accordingly, Applicant respectfully submits that claims 1 and 9 are allowable over the cited references.

Claims 2-8 and 16 depend upon independent claim 1. Claims 10-15 and 17 depend upon independent claim 9. Consequently, the arguments herein apply with full force to claims 2-8 and 10-17. Accordingly, applicant respectfully submits that claims 2-8 and 10-17 are allowable over the cited references.

Accordingly, for the above-mentioned reasons, Applicant respectfully submits that the claims are allowable over the cited reference. Consequently, Applicant respectfully requests reconsideration and allowance of the claims as currently presented.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issue remain, the Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Stephen G. Sullivan", is written over a horizontal line.

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